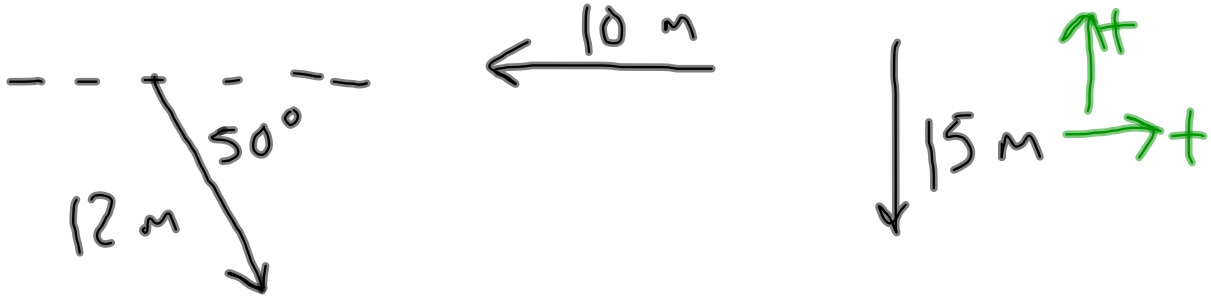
HW: p. 47: 3, 4, 6

Vector Quiz Friday



$a_x = (12\text{m})\cos(50^\circ)$

$b_x = -10\text{ m}$

$+\ c_x = 0\text{ m}$

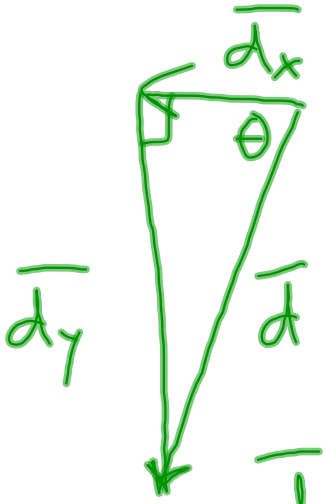
$d_x = -2.29\text{ m}$

$a_y = -(12\text{ m})\sin(50^\circ)$

$b_y = 0\text{ m}$

$+\ c_y = -15\text{ m}$

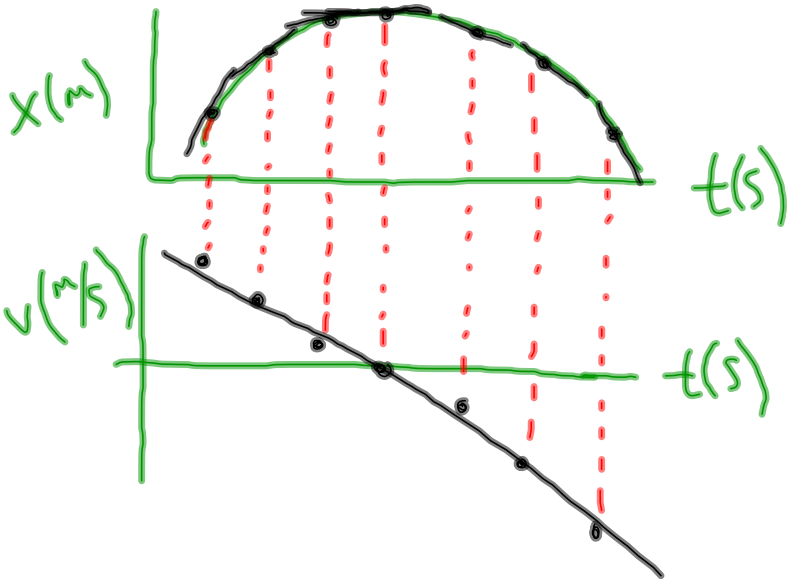
$d_y = -24.2\text{ m}$

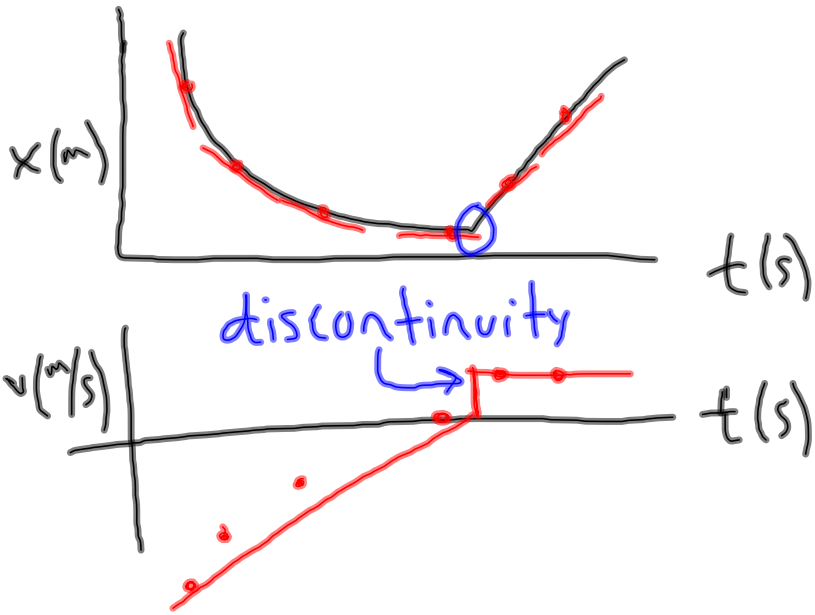


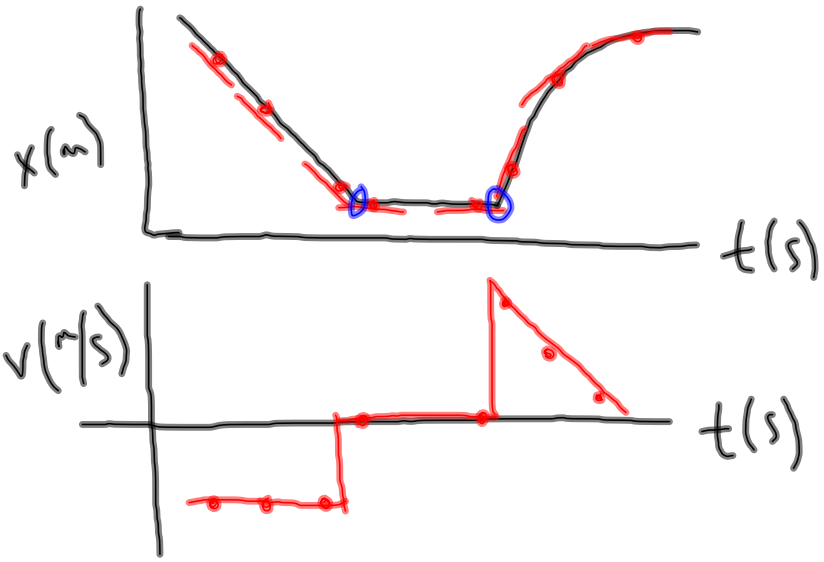
$d = 24.3\text{ m}$

$\theta = 84.6^\circ$

$\vec{d} = 24.3\text{ m} @ 84.6^\circ$ S of W


x(m)
t(s)
v(m/s)
t(s)


x(m)
t(s)
discontinuity
v(m/s)
t(s)

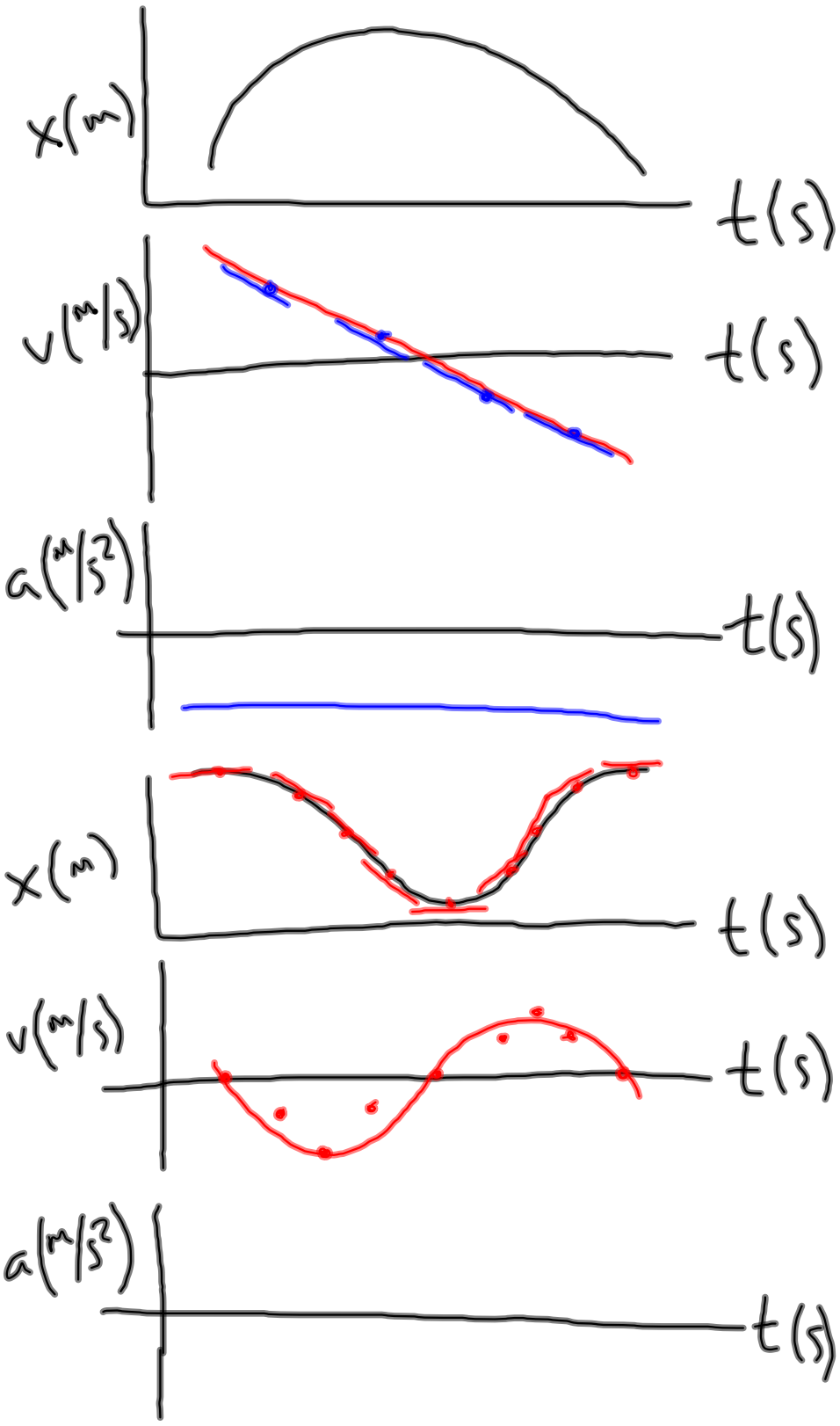

x(m)
t(s)
v(m/s)
t(s)

Acceleration:

- average: $a = \frac{\Delta v}{\Delta t} = \frac{v_f - v_i}{t_f - t_i}$

units: m/s^2

- instantaneous → slope of tangent line on velocity/time graph


x(m)
t(s)
v(m/s)
t(s)
a(m/s²)
t(s)
x(m)
t(s)
v(m/s)
t(s)
a(m/s²)
t(s)